Computers and Control Dept.   IT Society
Faculty of Engineering   Second Year
Tanta University   Time Allowed: 2 hours

Answer the following questions:

(1) What is SCADA? Give an example to explain how SCADA systems work?

(2) Explain what is meant by the following:

Polymorphic code – Virus self-modification – Stealth – cavity viruses – Cyclic redundancy checks – Resident viruses.

(3) What are the goals of green technology?

(4) Make up the HTML document that will give the following table:

DRILL SPEEDS

MATERIALS	DIAMETER IN INCHES	CUTTING SPEED		RPM
		Feet	Metres	
1. Brass	2.5	350		560
2. Cast iron	4.5		69	201
3. Copper	1	300		1200
4. Stainless Steel	3.625		46	167

Design a photo background for your page. Make your design jump to another webpage when you press each of the underlined words.

(5) What is cloud computing? Explain the basic types of cloud computing?

(6) Write a Matlab function 'check' that takes a vector as input and prints an error message unless every component is nonzero?

(7) Write a Matlab function to evaluate the function $y = sin^2(x^2)$. Plot the function.

(8) What is the output that is generated from the following Latex code:

```latex
\title{A Very Simple \LaTeX{} Template}
\author{
    2^{nd} year student \\
        Department of Computers $\&$ Control Science\\
    Tanta University\\
    Tanta City, \underline{Egypt}
}
\date{\today}

\documentclass[12pt]{article}

\begin{document}
\maketitle

\begin{abstract}
This is the paper's abstract
\end{abstract}

\section{Introduction}
This is time to work hard.

\begin{equation}
\label{eq5}
C(A)=\sum _{s=1}^{n}b_{s}(G_{s})
\end{equation}

Section~\ref{previous work} gives account of previous work.
Our new and exciting results are described in Section~\ref{results}.
Finally, Section~\ref{conclusions} gives the conclusions.

\section{Previous work}\label{previous work}
A much longer \LaTeX example was written by Gil~\cite{Gil:02}.

\begin{itemize}
\item $F$ is a partial-ordering of $E$.
\item For any $e \in E$ , $v$ is well-ordering.
\end{itemize}
\section{Results}\label{results}
In this section we describe the results.

\section{Conclusions}\label{conclusions}
We worked very hard.

\bibliographystyle{abbrv}
\bibliography{main}

\end{document}
```

Good Luck

Dr. Ahmed Elmogy